Section B:1
Waste Management

PROJECT MANAGERS
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SUMMARY

Waste Management (WM) consists of the Solid Waste Storage and Disposal, Project Baseline Summary (PBS) WM03, Work Breakdown Structure (WBS) 1.2.1; Solid Waste Treatment, PBS WM04, WBS 1.2.2; Liquid Effluents - 200 Area, PBS WM05, WBS 1.2.3.1; and the Waste Encapsulation and Storage Facility, PBS TP02, WBS 1.4.2.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope remains in Waste Management. For the purpose of performance analysis, PBS WM05 is reported in its entirety in the WM Project, which has the majority of the work scope and funding.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, RL) shows all four milestones completed early.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2001. Other data is updated as noted.

TOP 5 ACCOMPLISHMENTS FOR FY 2001

Accelerate Readiness to Receive Spent Nuclear Fuel (SNF) K Basin Sludge - Significant progress was made in FY 2001 to ready T Plant for receipt of K Basin Sludge. Ten deck sections at T Plant were cleared and four large pieces of equipment were removed from the canyon deck.

Mixed Low Level Waste (MLLW) Treatment - Shipped 698 cubic meters (m^3) of MLLW to Allied Technology Group (ATG) for treatment in FY 2001. A total of 446 m^3 of MLLW was treated at ATG, generating a total of 159 m^3 of treatment residues, which were returned to the low-level burial ground for disposal. An additional 4 m^3 of MLLW was treated on-site in FY 2001.

Transuranic (TRU) Production - Completed seven shipments to the Waste Isolation Pilot Plant (WIPP) in FY 2001. Certified a total of 64 m^3 of waste for shipment to WIPP.

Suspect TRU Waste Retrieval - Retrieved and designated 256 suspect TRU waste drums from the burial ground.

Liquid Waste Processing - Processed over 26 million gallons of wastewater through the 200 Area Effluent Treatment Facility (ETF) in FY 2001 supporting a variety of generators, including the Environmental Restoration Contractor (200-UP-1 Groundwater). Processed over 800,000 gallons of tank waste through the 242-A evaporator supporting the Office of River Protection.

ADDITIONAL FY 2001 ACCOMPLISHMENTS

Nuclear Materials Stabilization (NMS) Project Support - Supported the NMS Project by receiving 355 Pipe Overpack Containers of Plutonium - Aluminum alloys, and stabilized residues (Hanford and Rocky Flats ash) for storage.

Support to River Corridor Project (RCP) - Supported RCP removal of waste from the 324 and 327 buildings.

Low Level Waste (LLW) Disposal - Disposed of over 7,500 m^3, including over 5,900 m^3 in support of off-site customers.

Waste Encapsulation and Storage Facility (WESF) - Completed a significant electrical safety upgrade project at WESF in FY 2001.

SAFETY

WMP finished the year without a lost away injury, tallying more that 2.8M hours since the last lost away injury in October 1999. Additionally the first aid case rate dropped from 11 to 9. However, the OSHA recordable case rate spiked in the final quarter with the FY01 rate ending at 2.4, the same as FY 2000.

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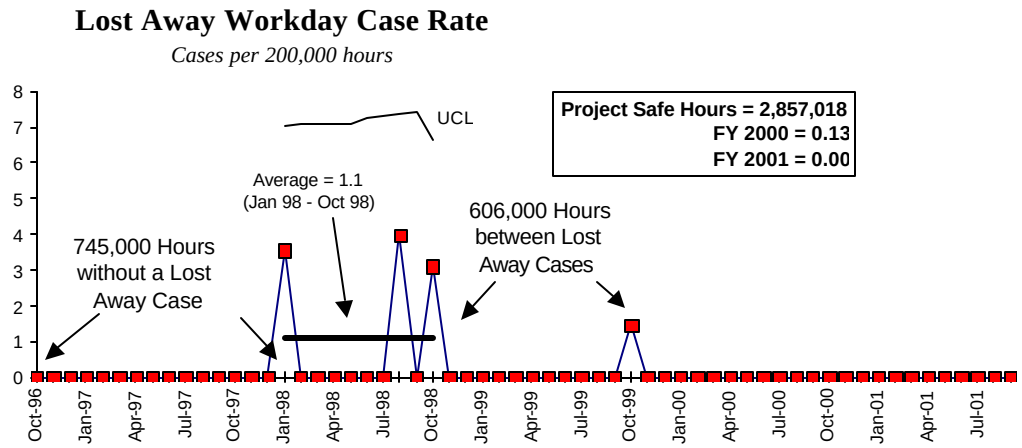

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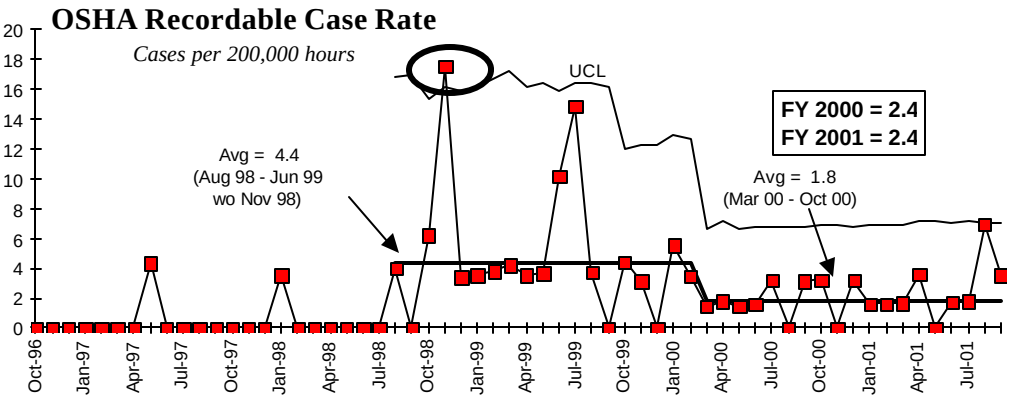

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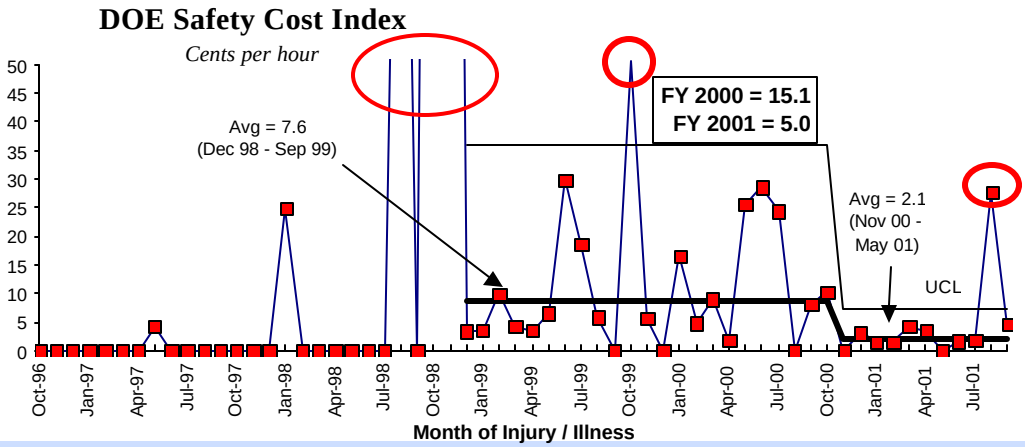

ISMS Status

Green

The WMP Employee Zero Accident Councils and the Management team are working to identify action steps that will result in meaningful changes in safety awareness and culture, in order to eliminate injuries. The project has continued to move forwarded to develop and submit an application for recognition under the DOE Voluntary Protection Program. Planned activities include conduct of a project wide self-assessment in November 2001, with application submittal in January 2002.

CONDUCT OF OPERATIONS

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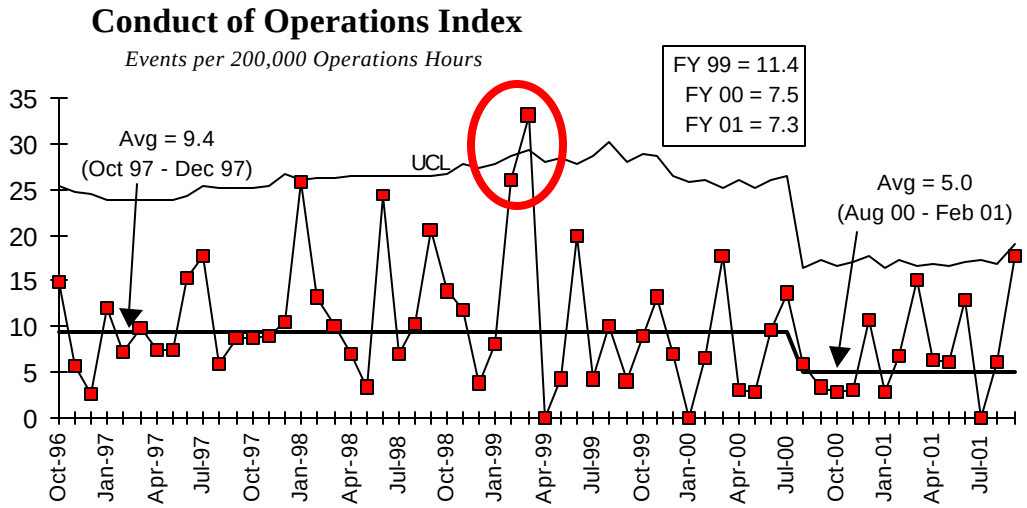


BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Green

The Waste Management Project is currently evaluating the conversion of the WRAP low-level waste glovebox line to provide added TRU waste processing capability. This conversion will improve WRAP operating reliability, increase throughput capacity, and through the application of supercompaction to waste destined for WIPP, will offer considerable return on investment (savings) over the FH contract period. Financial support from EM-50 is being pursued, through the Accelerated Site Technology Deployment process. A proposal has been drafted and will be submitted to the RL screening process by November 7, 2001. If approved, the proposal will be submitted to the EM-50 Program by November 30, 2001.

Opportunities for Improvement

WMP finished the year without a lost away injury, tallying more that 2,800,000 hours since the last lost away injury in October 1999. However, the OSHA recordable case rate spiked in the final quarter with the FY 2001 rate ending at 2.4, the same as FY 2000. The WMP Employee Zero Accident Councils and the Management team are working to identify action steps that will result in meaningful changes in safety awareness and culture, in order to eliminate injuries.

UPCOMING ACTIVITIES

Land Disposal Restrictions (LDR) Report - The Washington State Department of Ecology (Ecology) transmitted comments on the Report under the Tri-Party Agreement (TPA) in late September. A response was developed among site contractors and RL, and transmitted from RL to Ecology on October 29, 2001. Ecology continues to request milestone detail in the LDR report that is in conflict with both the approved FH baseline and the FH contract with RL. Ecology also has requested a revision of the CY 2000 report as part of resolution of their comments. However, a revision would impact efforts to produce next year's report. Work on preparation of the CY 2001 LDR report is scheduled to begin in December 2001. In accordance with TPA milestone M-26-01, the report is due by April 30, 2001. A "page change" method of revision for the CY 2000 report has been proposed. FH is awaiting Ecology's response.

Accelerate Readiness to Receive SNF K Basin Sludge - 1) Complete RL ORR for Shippingport (PA) fuel, 2) Complete major crane outage, 3) Initiate Shippingport fuel movement, and 4) Accelerate T Plant Canyon cell cleanout.

Waste Encapsulation and Storage Facility (WESF) Operations - Begin annual inner-capsule movement testing and capsule etching in October 2001. Prepare for DNFSB 2000-2 Phase II assessment of Confinement Ventilation Systems scheduled for December 2001.

MLLW Treatment - Prepare additional debris waste for shipment to ATG early next fiscal year.

Nuclear Materials Stabilization (NMS) Project Support - Continue to receive waste in support of Hanford ash processing through November 2001. Complete documentation to support shipment of the Sand, Slag and Crucible waste stream.

TRU Waste Retrieval - Continue technical planning to support buried drum retrieval start-up by April 2002.

TRU Recertification and PFP Audits - Support the Richland Office of Inspector General audit of Hanford's TRU shipments to Carlsbad.

Liquid Waste Processing - Continue groundwater processing at the 200 Area ETF. Prepare for two 242-A Evaporator campaigns scheduled for March and July 2002.

Green

MILESTONE ACHIEVEMENT

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	4	0	0	0	0	0	0	4
DOE-HQ	0	0	0	0	0	0	0	0
FO	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	0	0	0
Total Project	4	0	0	0	0	0	0	4

Only TPA/EA milestones and all FY 2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY 2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

FY2001 Tri-Party Agreement / EA Milestones		
Number	**Milestone Title**	**Status**
M-91-13 (A1C-01-001)	**Initiate Disposal of CH-LLWM**	**Due 06/30/01** – Completed September 15, 1999. **Green**
M-91-18 (WMP-01-001)	**Transmit T Plant Sludge Storage Conceptual Design to Ecology**	**Due 06/29/01 –** Completed June 11, 2001. **Green**
M-26-01K	**Annual Hanford LDR Report**	**Due 06/30/01 –** Completed June 28, 2001. **Green**
M-26-05H (WMH-00-006)	**Prep Biennial Tritium Treatment Technology Evaluation report**	**Due 08/31/01** – Completed July 25, 2001. **Green**
DNFSB Commitments		
	None.	

MILESTONE EXCEPTION REPORT

Number/WBS	Level	Milestone Title	Baseline Date	Forecast Date

Overdue – 0

FY 1999 Overdue – 0

TRP-98-709 1.4.2	**RL**	Complete Hot Cell Deactivation WESF Facility (A-E)	03/31/99	09/30/01

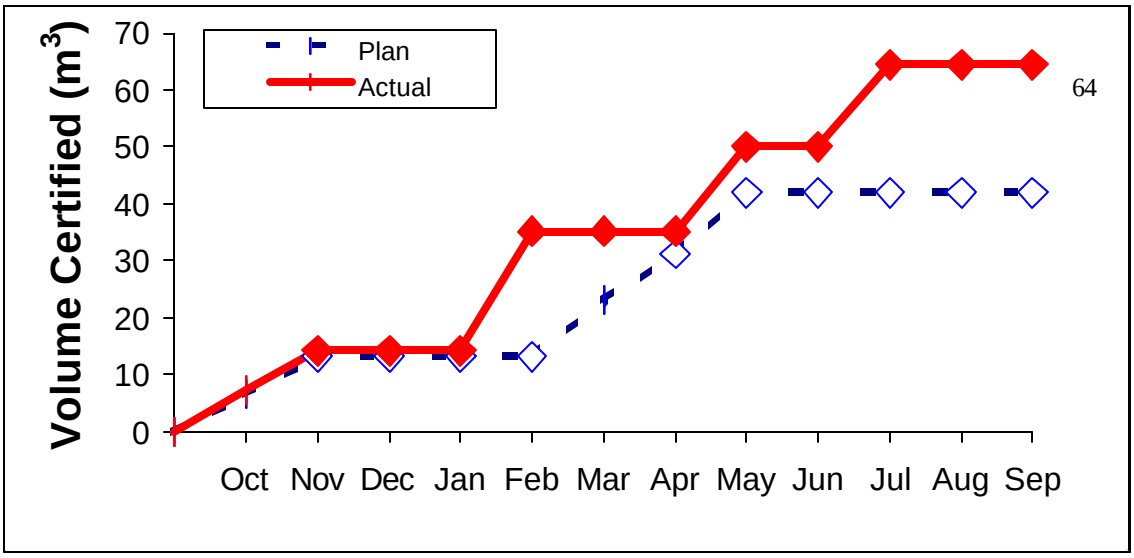
Cause: This milestone is was not completed as originally scheduled due to not being funded.
Impact: No impact.
Corrective Action: This milestone was completed on September 27, 2001.

FY 2002 Tri-Party Agreement / EA Milestones		
Number	**Milestone Title**	**Status**
	Nothing to report at this time.	
DNFSB Commitments		
	Nothing to report at this time.	

PERFORMANCE OBJECTIVES

CERTIFY TRU WASTE

Green



Exceeded the annual commitment of 42 m^3.

SHIP TRU WASTE

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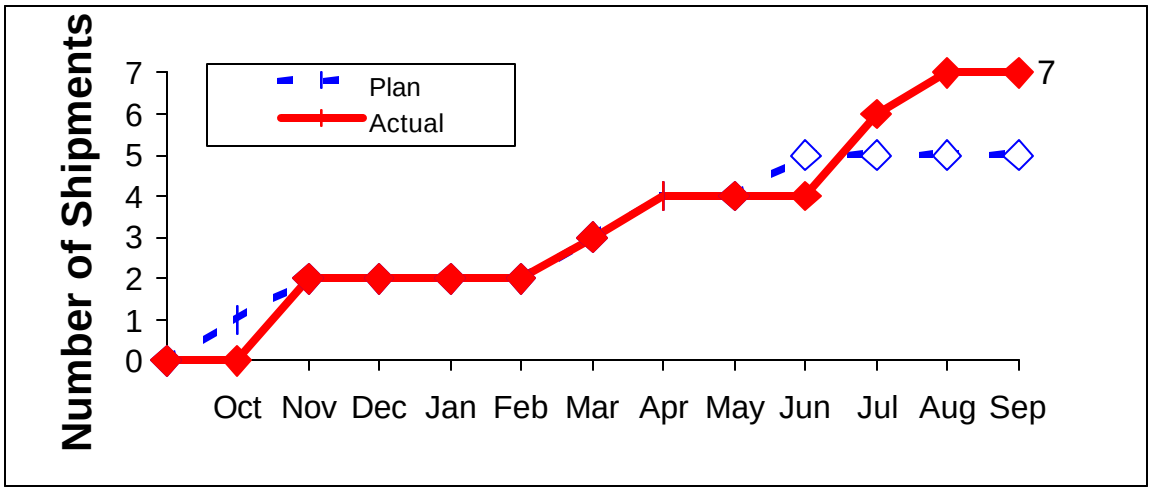

Exceeded the annual commitment of 5 shipments.

RETRIEVE TRU WASTE

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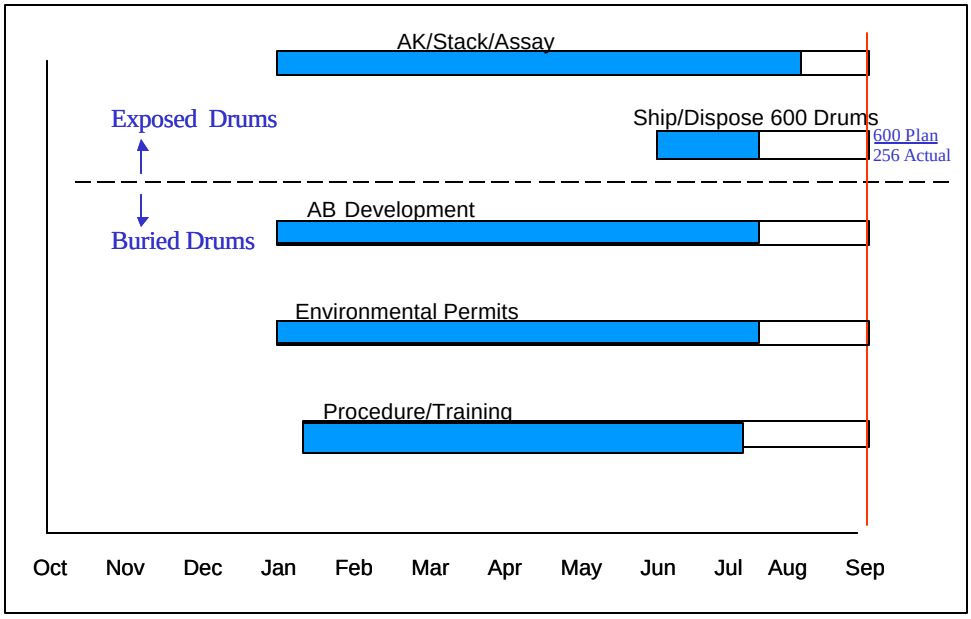


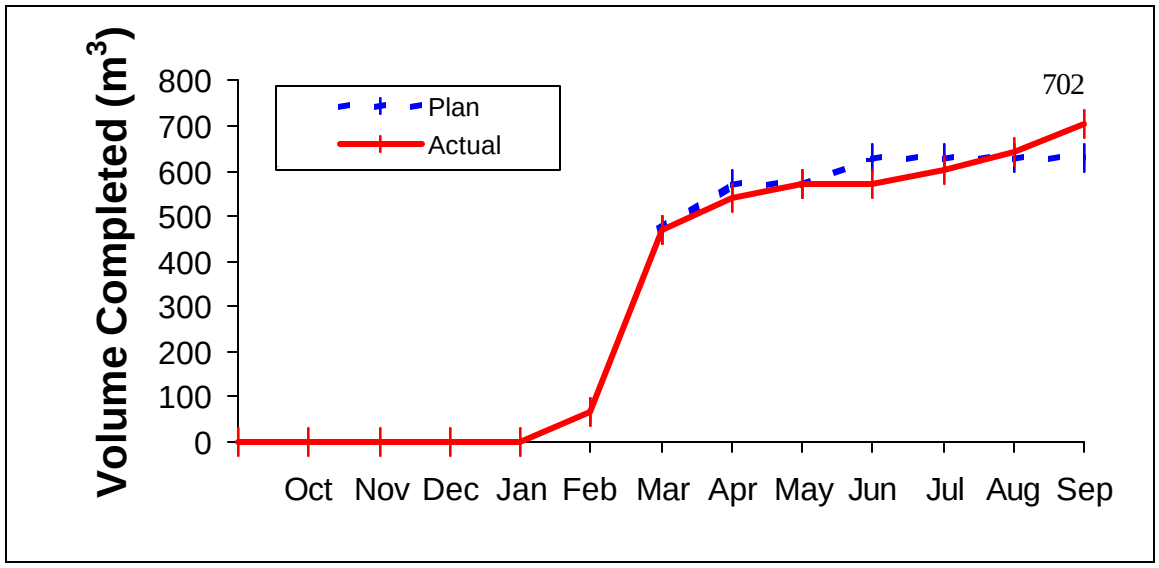
FISCAL 2001

Behind schedule.

- Retrieved 256 drums in FY 2001
- Recovery underway: On schedule by the second quarter of FY 2002.

TREAT AND DISPOSE MLLW

Green



Exceeded the annual commitment of 620 m^3.

ACCELERATE READINESS TO RECEIVE K-BASIN SLUDGE

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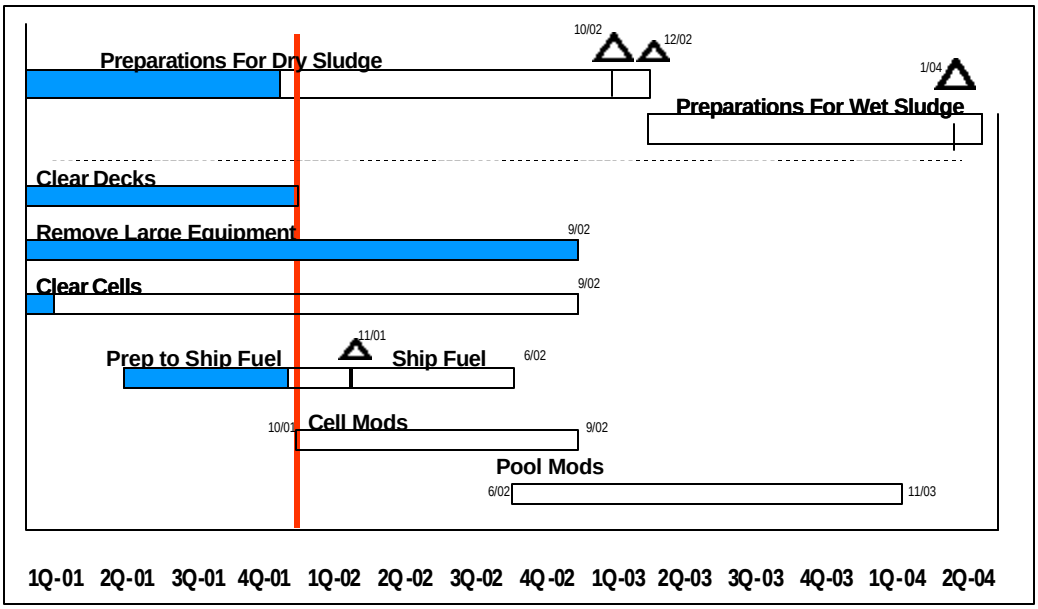


FISCAL 2001

The RL ORR for T Plant was terminated due to ORR team concerns with FH's readiness with respect to requirements incorporation and procedural/personnel adequacy. FH was assembled teams to address identified issues. Discussions continue with RL (Knollmeyer) to establish the basis for ORR completion.

In parallel, the planned 45-ton crane maintenance outage is proceeding.

FY 2001 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES ($000)

Green

	By PBS	FYTD BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	$ 30,278	$ 29,903	$ 25,739	$ (376)	-1%	$ 4,164	14%	$ 30,278
PBS WM04 WBS 1.2.2	Solid Waste Treatment	$ 43,723	$ 40,003	$ 41,807	$ (3,720)	-9%	$ (1,804)	-5%	$ 43,723
PBS WM05 WBS 1.2.3	Liquid Effluents - 200/300 Area	$ 26,540	$ 26,038	$ 24,087	$ (502)	-2%	$ 1,951	7%	$ 26,540
PBS TP02 WBS 1.4.2	WESF	$ 10,899	$ 10,889	$ 10,568	$ (10)	0%	$ 320	3%	$ 10,899
	Total	$ 111,440	$ 106,833	$ 102,201	$ (4,608)	-4%	$ 4,632	4%	$ 111,440

* Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM).
Note: Above data includes RL costs.

FISCAL YEAR SCHEDULE / COST PERFORMANCE

The unfavorable schedule variance is primarily due to the delay of treatment activities at ATG caused by thermal treatment process/startup issues. Also contributing to the variance are the T Plant pre-filter and fan replacement, which were not started until September, and delays in TRU retrieval activities due to the unvented drum USQ.

The favorable cost variance is primarily due to the accrual reversal of the FY 2000 fee and labor underruns due to hiring restrictions and IROF's, and labor underruns, reduced sample analyses, passbacks, and a reduced need for crane and rigging support at the 200 Area Liquid Effluents Facility. The favorable cost variance is partially offset by the agreement to pay the vendor, ATG, upfront for waste treatment in FY 01, rather than on return of the waste. Also contributing to the variance are increased costs due to crane outages and corrective maintenance at T Plant.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

Schedule Variance Analysis: (-$4.6M)

Solid Waste Storage & Disposal — 1.2.1/ WM03
Description /Cause: The unfavorable schedule variance of $0.4M (1 percent) was within the established threshold.
Impact: No Impact.
Corrective Action: No corrective action required.

Solid Waste Treatment - 1.2.2/WM04
Description and Cause: The unfavorable schedule variance of $3.7M (9 percent) is due to the delay of treatment activities at ATG caused by thermal treatment process/startup issues. Also contributing to the variance are the T Plant pre-filter and fan replacement, which were not started until September, and delays in TRU retrieval activities due to the unvented drum USQ.
Impact: No Impact.
Corrective Action: No corrective action required.

Liquid Effluents — 1.2.3.1/ WM05
Description /Cause: The unfavorable schedule variance of $0.5M (2 percent) was within the established threshold.
Impact: No Impact.
Corrective Action: No corrective action required.

WESF — 1.4.2/ TP-02
Description /Cause: The unfavorable schedule variance of $0.0M (0 percent) was within the established threshold.
Impact: No Impact.
Corrective Action: No corrective action required.

Cost Variance Analysis: (+$4.6M)

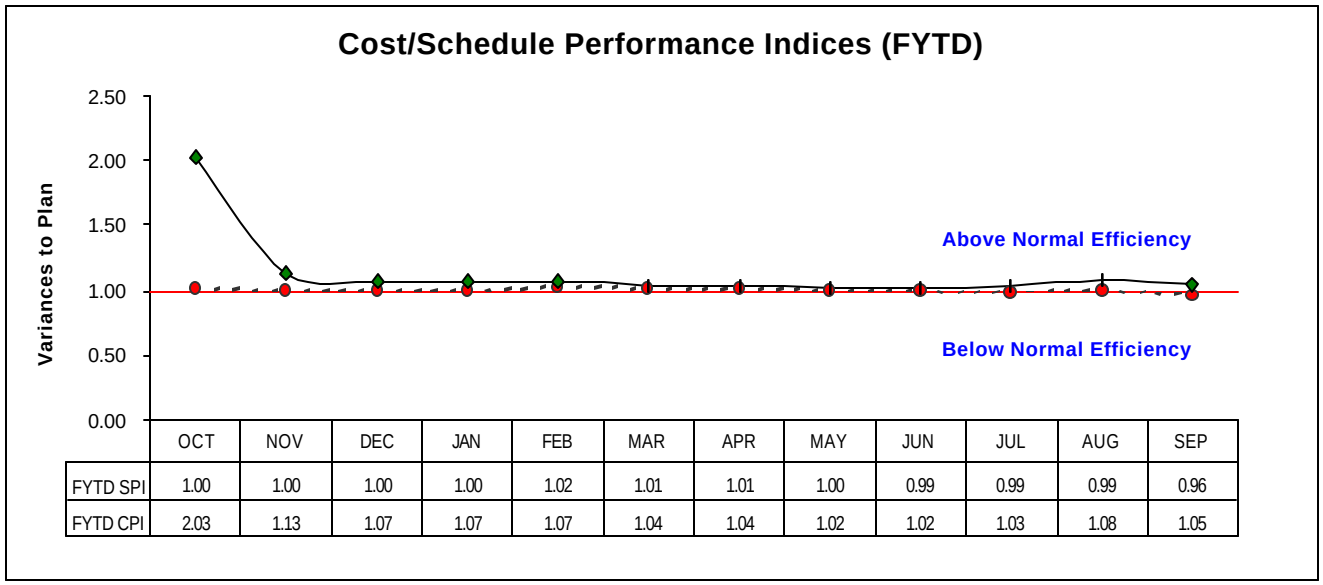
Solid Waste Storage and Disposal - 1.2.1/WM03
Description and Cause: The favorable cost variance of $4.2M (14 percent) is due to the accrual reversal of the FY 2000 fee and labor underruns due to hiring restrictions and IROF's.
Impact: No impact.
Corrective Action: No corrective action required.

Solid Waste Treatment — 1.2.2/WM04
Description and Cause: The unfavorable cost variance of $1.8M (5 percent) is due to the agreement to pay the vendor, ATG, upfront for waste treatment in FY 01, rather than on return of the waste. Also contributing to the variance are increased costs due to crane outages and corrective maintenance at T Plant.
Impact: No impact.
Corrective Action: No corrective action required.

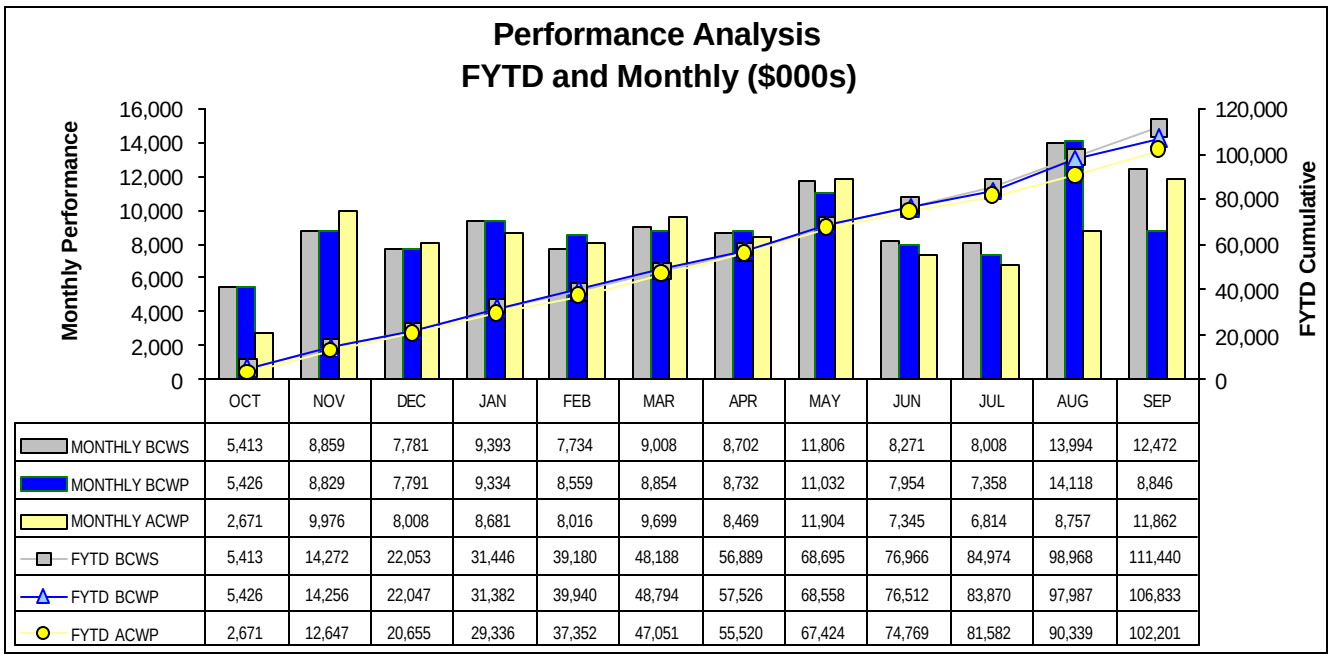
Liquid Effluents — 1.2.3/WM05
Description and Cause: The favorable cost variance of $2.0M (7 percent) is primarily due to labor underruns, reduced sample analyses, passbacks, and a reduced need for crane and rigging support.
Impact: No impact.
Corrective Action: No corrective action required.

WESF — 1.4.2/TP02
Description and Cause: The favorable cost variance of $0.3M (3 percent) was within the established threshold.
Impact: No impact.
Corrective Action: No corrective action required.

SCHEDULE / COST PERFORMANCE (FISCAL YEAR)



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FYTD SPI	1.00	1.00	1.00	1.00	1.02	1.01	1.01	1.00	0.99	0.99	0.99	0.96
FYTD CPI	2.03	1.13	1.07	1.07	1.07	1.04	1.04	1.02	1.02	1.03	1.08	1.05



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY BCWS	5,413	8,859	7,781	9,393	7,734	9,008	8,702	11,806	8,271	8,008	13,994	12,472
MONTHLY BCWP	5,426	8,829	7,791	9,334	8,559	8,854	8,732	11,032	7,954	7,358	14,118	8,846
MONTHLY ACWP	2,671	9,976	8,008	8,681	8,016	9,699	8,469	11,904	7,345	6,814	8,757	11,862
FYTD BCWS	5,413	14,272	22,053	31,446	39,180	48,188	56,889	68,695	76,966	84,974	98,968	111,440
FYTD BCWP	5,426	14,256	22,047	31,382	39,940	48,794	57,526	68,558	76,512	83,870	97,987	106,833
FYTD ACWP	2,671	12,647	20,655	29,336	37,352	47,051	55,520	67,424	74,769	81,582	90,339	102,201

FUNDS MANAGEMENT
FUNDS VS ACTUAL COSTS ($000)
FY 2001

Green

		FY 2001 Funds	FY 2001 Actual Costs	Uncosted
1.2	**Waste**			
	TP02, WM03-WM05			
	Post 2006 - Operating	**$ 101,84**	**$ 95,26**	**$ 6,57**
	Total	**$ 101,84**	**$ 95,26**	**$ 6,57**

[Status through September 30, 2001]

NOTE: Includes 300 Area Liquids and RL costs.

ISSUES

DOE Issues

Nothing to report at this time.

DOE Requests

FH needs to reach consensus with RL on the safety basis and readiness level for buried drum retrieval. Project planning is underway for covered-drum TRU waste retrieval operations to achieve PHMC contract P.I. FHI-M4, and TPA Milestone M-91-07. RL authorization of the Safety Basis is a critical-path activity leading to readiness assessment during the second quarter of FY 2002. Readiness must be completed by April 2002 to support the baseline plan of retrieving 1200 drums in FY 2002.

A supporting study on hydrogen accumulation in unvented TRU drums will be transmitted to RL by November 15, 2001. The results of this study will be incorporated in the Safety Basis, and requirements established in the Safety Basis may affect the level of readiness assessment for the project. FH anticipates the need for extensive interaction and consensus building with RL AB and WM Programs Divisions during November and December 2001 to finalize and approve the Safety Basis in support of timely completion of project readiness.

REGULATORY / TECHNICAL / EXTERNAL ISSUES

Nothing to report at this time.

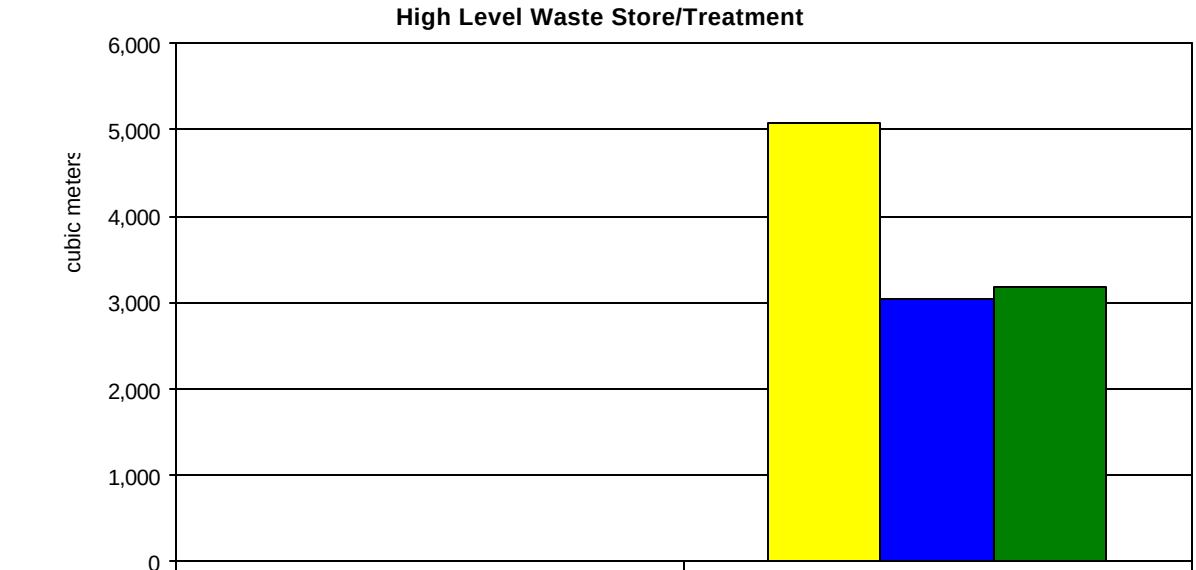
BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY01 COST IMPACT $000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
Nothing to report.									
ADVANCE WORK AUTHORIZATIONS									

KEY INTEGRATION ACTIVITIES

- **SNF Project Support —** Prepare T Plant to receive SNF K-Basin sludge.
- **Liquid Effluents —** Continue support of UP-1 Groundwater treatment of the Environmental Restoration Contractor at the 200 Area Effluent Treatment Facility. Support the Office of River Protection with two 242-A evaporator campaigns in March and July 2002.
- **RCP Support -** Continue support to RCP for the removal of waste from the 324 and 327 buildings as well as further waste disposal from demolitions and Accelerated Deactivation Programs.
- **NMS Project Support –** Continue support to the NMS Project for the removal of waste from the PFP.

High Level Waste (HLW): Storage and Treatment

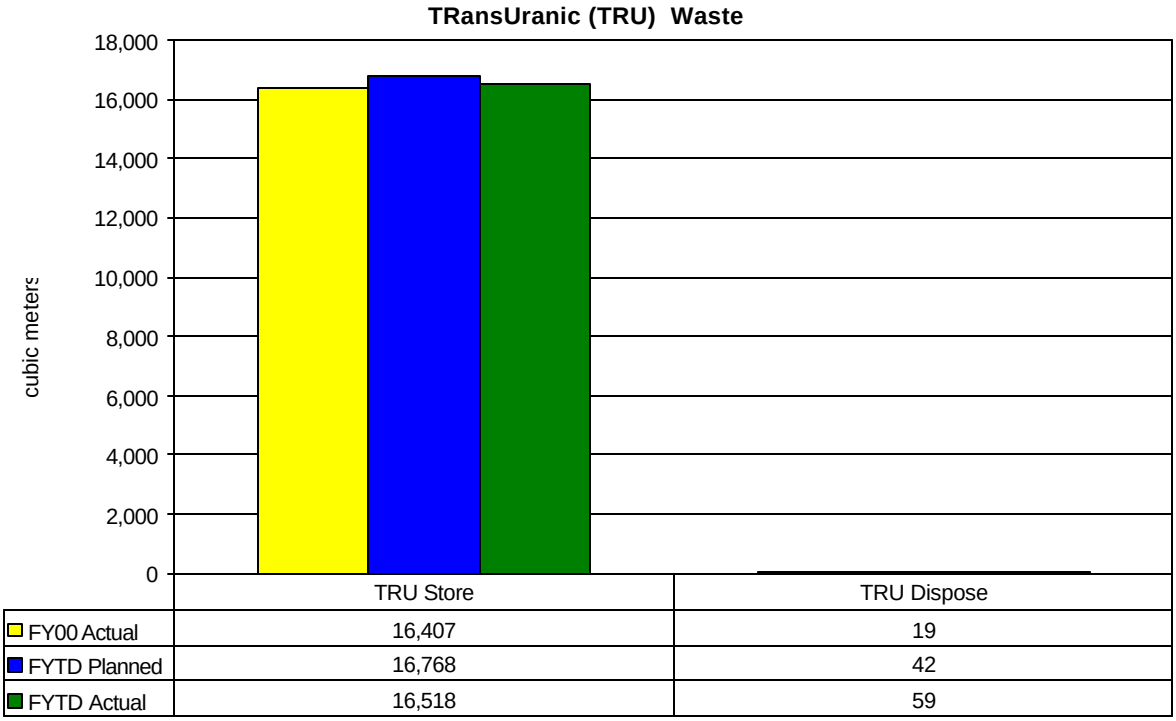


	HLW Store	HLW Treat
FY00 Actual	2	5,070
FYTD Planned	2	3,028
FYTD Actual	2	3,179

Storage: Storage continues to be provided for HLW Cesium 137 and Strontium 90 capsules in the Waste Encapsulation and Storage Facility Pool Cells.

Treatment: A single campaign of the 242-A Evaporator was completed on March 29, 2001. The total volume of waste processed was 3,179 cubic meters (840,000 gallons).

TRANSURANIC (TRU) WASTE: STORAGE, TREATMENT AND DISPOSAL

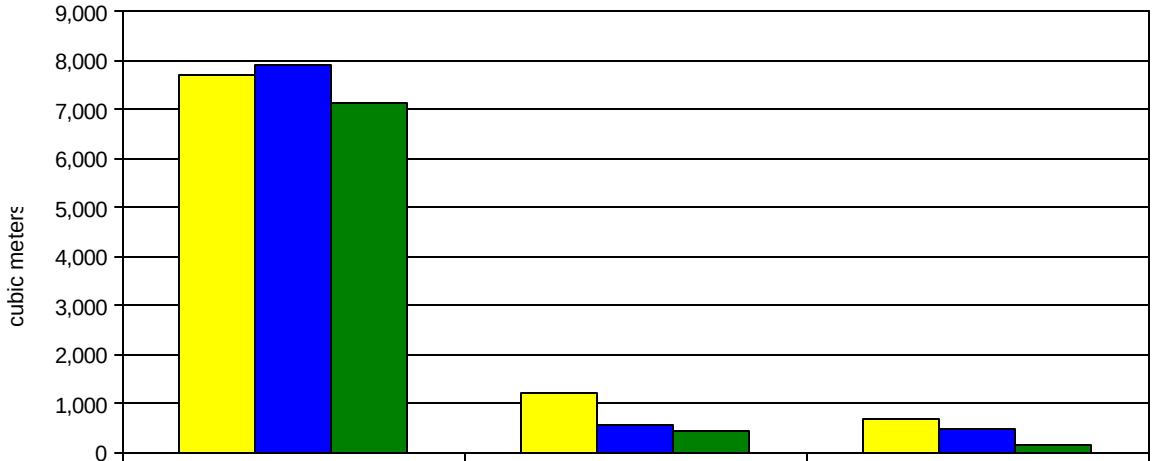


	TRU Store	TRU Dispose
FY00 Actual	16,407	19
FYTD Planned	16,768	42
FYTD Actual	16,518	59

Storage: Storage continues to be provided for existing and newly generated TRU waste.

Disposal: Completed two shipments above plan to WIPP. Improved efficiencies in head gas sampling and analysis as well as development of acceptable knowledge packages enabled certification of the additional TRU waste shipments.

MIXED LOW LEVEL WASTE: STORAGE, TREATMENT, AND DISPOSAL



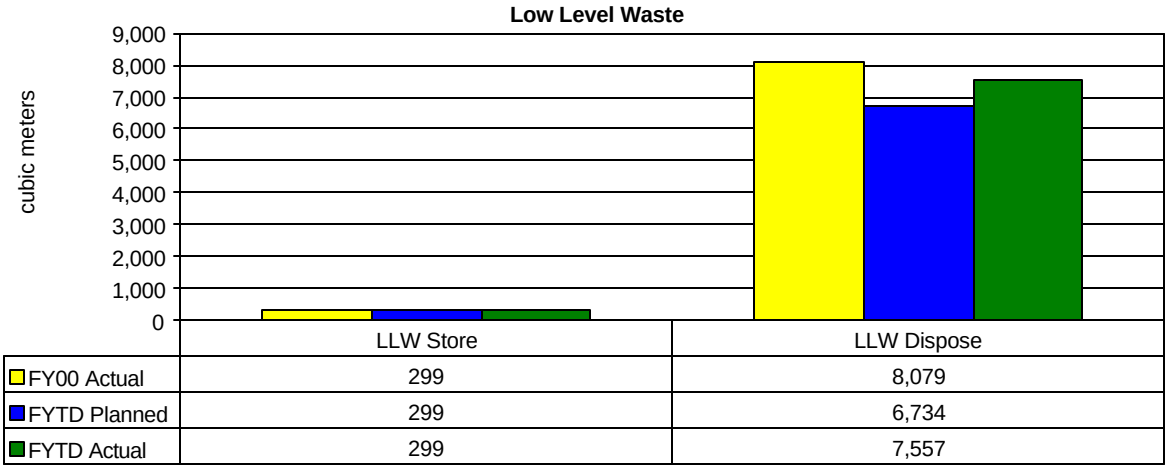
	MLLW Store	MLLW Treat	MLLW Dispose
FY00 Actual	7,677	1,224	666
FYTD Planned	7,895	568	478
FYTD Actual	7,108	446	160

Storage: Primary reasons for less MLLW receipts than originally forecasted for storage include chemical clean out at the Plutonium Finishing Plant produced less mixed waste than anticipated, and a switch to higher priority work in the 300 area resulted in no MLLW shipments from the 327 facility.

Treatment: Less MLLW treatment is reported for the year than planned because not all waste shipped to Allied Technology Group (ATG) during FY01 was treated.

Disposal: Planned disposal volumes for FY01 are based on pretreatment volume while the actual disposal value recorded is post treatment. Currently there is a greater than 2:1 reduction ratio.

LOW LEVEL WASTE (LLW): STORAGE, TREATMENT, AND DISPOSAL



	LLW Store	LLW Dispose
FY00 Actual	299	8,079
FYTD Planned	299	6,734
FYTD Actual	299	7,557

Storage: Storage continues to be provided for LLW that does not meet waste acceptance criteria for disposal in the burial grounds.

Disposal: About 12 percent more LLW was disposed in the Low-Level Burial Grounds in FY01 than planned. This is the result of continued receipt of LLW from Parks Township, disposal of irradiated Cat III fuels from the 300 area fuels supply (unforecasted for FY01 in the original forecast data call) , substantially higher Cat III LLW volumes from Brookhaven, and a significant amount of PFP CAT I LLW that required stabilization.